

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claims 1-78 without prejudice.

79. (New) A dermatologic treatment apparatus comprising
a light source providing light of at least 4 J/cm^2 and having sufficient fluence to effect a hair-removal dermatological treatment at a target area on a human;
optical apparatus, having an outlet, that communicates the fluence substantially across the outlet, and
an optical diffuser that diffuses the light so that the light emitted from the apparatus is eye safe.
80. (New) The dermatologic treatment apparatus of claim 79 wherein the hair removal is at least temporary.
81. (New) The apparatus of claim 79, wherein the optical diffuser comprises at least one of a group including a transmissive diffuser and a reflective diffuser.
82. (New) The apparatus of claim 80, wherein the optical diffuser is a transmissive diffuser and comprises a bulk scattering diffuser medium.
83. (New) The apparatus of claim 80, wherein the optical diffuser comprises at least one of a group comprising a refractive material, a diffractive material, a material having random surface irregularities, and a material having a patterned surface.
84. (New) The apparatus of claim 79 wherein the optical apparatus distributes the light substantially uniformly across the outlet.

85. (New) The apparatus of claim 79, wherein the light source includes one or more diode lasers.

86. (New) The apparatus of claim 85, wherein the one or more diode lasers includes one or more laser diode bars each comprising multiple laser diode emitters.

87. (New) The apparatus of claim 79, wherein the light source comprises one or more flashlamps.

88. (New) The apparatus of claim 79, wherein a principal optical axis of light emitted from the light source striking the diffuser is not parallel to the normal of the surface of the diffuser.

89. (New) The apparatus of claim 88, wherein the light source comprises one or more laser diode bars.

90. (New) The apparatus of claim 79 wherein the light source provides pulses of light.

91. (New) The apparatus of claim 90 wherein the fluence of the pulse at the target area is between 4 J/cm^2 and 100 J/cm^2 .

92. (New) The apparatus of claim 79 wherein the light is primarily within a spectral band of 500 nm to 1100 nm.

93. (New) The apparatus of claim 90 wherein the pulses have a pulse duration between 10 milliseconds and 1 second.

94. (New) A dermatologic treatment apparatus, comprising

a light source providing pulses of light of at least 4 J/cm^2 and having having sufficient fluence to cause hair removal at a target area of a patient; and

optical apparatus for distributing light from the light source substantially uniformly across an input of a diffuser wherein the diffuser diffuses the light sufficiently to cause the apparatus to be eye-safe while maintaining sufficient fluence to cause hair removal at the target area of a patient.

95. (New) The dermatologic treatment apparatus of claim 94 wherein the diffuser has substantially the same area as the input.

96. (New) The dermatologic treatment apparatus of claim 94 wherein the diffuser is larger in area than the input.

97. (New) The apparatus of claim 94 wherein the light source is divergent.

98. (New) The apparatus of claim 97 wherein the light source comprises one or more diode lasers.

99. (New) The apparatus of claim 98, wherein the one or more diode lasers includes one or more laser diode bars each comprising multiple laser diode emitters.

100. (New) The apparatus of claim 94, wherein the light source comprises at least one flashlamp.

101. (New) The apparatus of claim 94, wherein the optical apparatus distributes light from the light source across substantially all of the diffuser.

102. (New) The apparatus of claim 94, wherein the fluence is between 4 J/cm^2 and 100 J/cm^2 .

103. (New) The apparatus of claim 94, wherein a principal optical axis of light emitted by the light source striking the diffuser is not parallel to the normal of the surface of the diffuser.

104. (New) The apparatus of claim 103, wherein the light source comprises one or more laser diode bars.

105. (New) A dermatologic treatment apparatus, comprising
a light source comprising a plurality of laser diodes providing light pulses of at least 4 J/cm² and having sufficient fluence to effect a hair removal dermatological treatment at a target area on a patient,
optical apparatus, having an outlet, that communicates the light pulses substantially across the outlet;
an optical diffuser for diffusing the light received from the outlet so that the light pulses emitted from the apparatus are eye safe for the patient.

106. (New) The apparatus of claim 105, wherein the optical diffuser comprises at least one of a group comprising a transmissive diffuser and a reflective diffuser.

107. (New) The apparatus of claim 105, wherein the light source is divergent.

108. (New) The apparatus of claim 107 wherein the optical apparatus comprises a mixer for distributing light substantially uniformly at the outlet.

109. (New) The apparatus of claim 107, wherein a principal optical axis of light emitted by the light source striking the diffuser is not parallel to the normal of the surface of the diffuser.

110. (New) The apparatus of claim 109, wherein the optical diffuser comprises a transmissive bulk diffuser.

111. (New) A dermatologic hair-regrowth-inhibiting apparatus, comprising

- a light source comprising one or more laser diodes configured to produce pulses of light in a hair-regrowth-inhibiting procedure wherein the pulses are of sufficient fluence to inhibit hair-regrowth in a target area of a patient;
- a mixer, having an outlet, for substantially uniformly distributing light from the light source across the outlet;
- a diffuser, disposed to receive light from the outlet, for diffusing the light sufficiently that the pulses of light emitted from an output of the diffuser are eye-safe at all distances while remaining of sufficient fluence to inhibit hair-regrowth in the target area of the patient; and

wherein the majority of the fluence of the light pulses is within a spectral band of 500 nm to 1100 nm, the pulses have a pulse duration between 10 milliseconds and 1 second, and the fluence of the pulse at the target area is between 4 J/cm² and 100 J/cm².

112. (New) The apparatus of claim 111 wherein the optical diffuser comprises a transmissive bulk diffuser.

113. (New) The apparatus of claim 111 wherein the light source is divergent.

114. (New) A dermatologic apparatus for removing hair comprising

- a divergent light source comprising a plurality of laser diode bars each comprising a plurality of laser diode emitters and configured to produce pulses of light substantially within the spectral band of 500 nm to 1100 nm to effect hair removal in a target area of a patient, the pulses of light having a pulse duration between 10 milliseconds and 1 second and a fluence at the target area between 4 J/cm² and 100 J/cm²,
- a mixer, having an outlet, for substantially uniformly distributing the light pulses across the outlet, and

a bulk transmissive diffuser, disposed to receive light from the outlet, for diffusing the light sufficiently that the pulses of light emitted from an output of the diffuser are eye-safe.